

REMARKS/ARGUMENTS

Claims 1, 3-7, 12-14, 19-24 and 28-42 are pending in the application. Claims 31-42 were withdrawn based on an election to a restriction requirement made on September 28, 2007. Claims 1, 3, 7, 12-14, 19-24 and 28-30 stand rejected. Claims 1, 12, and 22 are amended herein. No new matter is added.

35 U.S.C. § 103(a)

Claims 1, 3-7, 12-14, 19-24 and 28-30 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination by Young, *et al.*, *J of Biological Chemistry* (1997) 272(18):12116-12121 in view of T'Jampens, *et al.*, *FEBS Letters*, 516:20-26 (2002) and Khandekar, *et al.*, *J of Biomolecular Screening*, 10(5)447-455 (2005). Specifically, the Examiner alleges that Young, *et al.* teach a test inhibitor, SB203580, and a p38 kinase incubated with FSBA and ATP to determine the kinase inhibitory activity of SB203580. The Examiner further alleges that the claims as amended differ from Young in that they include the limitation of using methods of Western Blot or mass spectroscopy to determine binding of the kinase analyte. The Examiner then alleges that T'Jampens, *et al.* teach determining binding FSBA and ATP by Western blot analysis. The Examiner goes on to allege that Khandekar *et al.* teach a GC/MS method to monitor binding of ATP kinase inhibitors using FSBA.

The Applicants respectfully submit that claims 1, 12 and 22 are amended herein to remove the recitation of Western Blot. Thus, any rejection of these claims based on T'Jampens is rendered moot. The Applicants further submit that Khandekar *et al.* was published after the filing of the instant application and, therefore, cannot be considered prior art.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-7, 12-14, 19-24 and 28-30 under 35 U.S.C. § 103(a). Accordingly, the Applicants respectfully request withdrawal of these rejections.

35 U.S.C. § 112, first paragraph

Claims 1, 3-4, 6-7, 12-14, 20, 22-24, 28-29 stand rejected under 35 U.S.C. § 112, first paragraph. The Examiner concedes that the specification is enabled for a kinase and biotinylated FSBA; however, he alleges that it is not enabled for any analyte. The Applicants respectfully disagree. However, in an effort to advance prosecution the Applicants amend claims 1, 12, and 22 to recite that the analyte binds covalently to the ATP binding site of the kinase. Support for this amendment can be found, for example, at page 6, lines 11-18 of the specification, at which the Applicants describe that FSBA, which is an exemplary analyte that binds covalently to the ATP binding site of a kinase.

The Applicants respectfully submit that under the guidance provided by *In re Wands*, as cited by the Examiner, some experimentation may be necessary to practice a claimed invention. The test of enablement is not whether any experimentation is necessary, but whether it is undue. *In re Angstadt*, 537 F.2d 498, 504 (CCPA 1976). The Applicants respectfully submit that they show throughout the specification that an analyte that binds covalently to the ATP site of a kinase can be used to detect a compound's interaction with or inhibition of a kinase using methods such as mass spectroscopy. In the examples provided in the specification, the Applicants use FSBA or biotinylated FSBA as an example analyte that covalently binds to ATP binding site of a kinase. However, the Applicants respectfully submit that the numerous examples provided in the application enable general, rapid and reproducible means to screen inhibitors of protein kinase using mass spectroscopy. The Applicants further submit that the skilled person would understand through the teaching of the present invention how to apply the methods described for detecting any compound's interaction with any kinase having an ATP binding site regardless of the comparative analyte capable of covalently binding to the kinase's ATP binding site. Thus, the Applicants submit that they enable methods employing any analyte capable of covalently binding a kinase and using the methods of mass spectroscopy.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-4, 6-7, 12-14, 19-20, 22-24, and 28-29 under 35 U.S.C. § 112, first paragraph. Accordingly, the Applicants respectfully request withdrawal of these rejections.

35 U.S.C. § 112, second paragraph

Claims 1, 3-7, 12-14, 19-24, 28-30 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. In particular, the Examiner alleges the phrase “capable of binding” may be more positively stated as “which binds.” The Applicants amend claim 1 herein to recite that the analyte covalently binds to the ATP site of said kinase.

In addition, the Examiner alleges that claim 1 is incomplete because there is allegedly no step accomplishing the preamble. The Applicants amend claim 1 to recite a step comparing the mass peak of said analyte and kinase with the mass peak of said test compound and said kinase and then determining if the test compound is an inhibitor of said kinase. Support for this amendment can be found, for example, in Examples 2-4 of the specification.

The Examiner also suggests that claim 22 may have a typo. The Applicants do not find a typographical error in claim 22, but will correct any typographical errors that are specified by the Examiner.

The Applicants respectfully submit that, in view of the forgoing remarks and the claims as amended, the Applicants have overcome the rejection of claims 1, 3-7, 12-14, 19-24, 28-30 under 35 U.S.C. § 112, second paragraph. Accordingly, the Applicants respectfully request withdrawal of these rejections.

Title

The Examiner alleges that the title is not aptly descriptive and requires a new title. The Applicants amend the title herein and submit that the new title is aptly descriptive.

Abstract

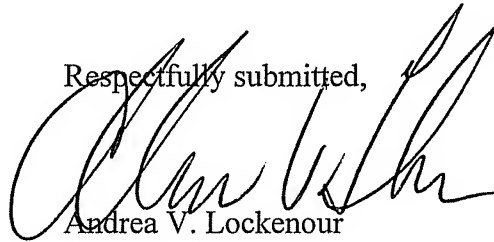
The Examiner objects to the abstract because it does not recite FSBA. The Applicants provide a new abstract herein.

The Applicants reserve the right to prosecute, in one or more patent applications, the claims to non-elected inventions, the cancelled claims, the claims as originally filed, and any other claims supported by the specification. The Applicants thank the Examiner for the Office

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Action and believe this response to be a full and complete response to such Office Action. Accordingly, favorable reconsideration and allowance of the pending claims is earnestly solicited. If it would expedite the prosecution of this application, the Examiner is invited to confer with the Applicants' undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrea V. Lockenour', is written over the text 'Respectfully submitted,'.

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